2.0 Recommended Transportation Improvements

Columbia Heights/Mount Pleasant Transportation Study

2.0 Recommended Transportation Improvements

This section outlines a number of short- and long-term transportation improvement recommendations developed for the Mount Pleasant and Columbia Heights neighborhoods. Recommendations outlined in this section are based on extensive field observations, data collection, analysis of existing conditions, and outreach to neighborhood residents.

The evaluation of potential improvements is based on key objectives developed in the first phase of the study.

- Promote safe and convenient mobility for all forms of transportation – pedestrian/bicycle/vehicular/transit;
- Provide a framework for addressing future transportation needs through transit-oriented development principles;
- Provide a forum for community input on future transportation system elements;
- Develop creative approach to right-size parking for urban residential, commercial, and employment needs; and
- Improve aesthetic of neighborhood streets.

Figures 2.1, 2.14, 2.16, and 2.20 show the location of these improvements, grouped by traffic, transit, pedestrian, and bicycle recommendations. The transportation recommendations below should be considered at a first-stage, planning-level recommendation. In some cases, recommendations will require additional design and analysis prior to implementation.

2.1 Traffic

In general, congestion within the study area is limited to only a few intersections. Peak-period parking restrictions increase capacity through the neighborhood and most intersections operate at an acceptable level of service during peak periods. By contrast, weekend parking, in particular on Sundays, contributes to excessive delays in a few locations within the study area. Recommendations within this subsection address isolated areas of congestion as well as pedestrian safety issues created by excessive signal timing lengths. In addition, some geometric changes are recommended to promote pedestrian safety and accommodate increased traffic expected with several large-scale developments along 14th Street. Figure 2.1 illustrates the traffic recommendations.

Signal Timing Changes

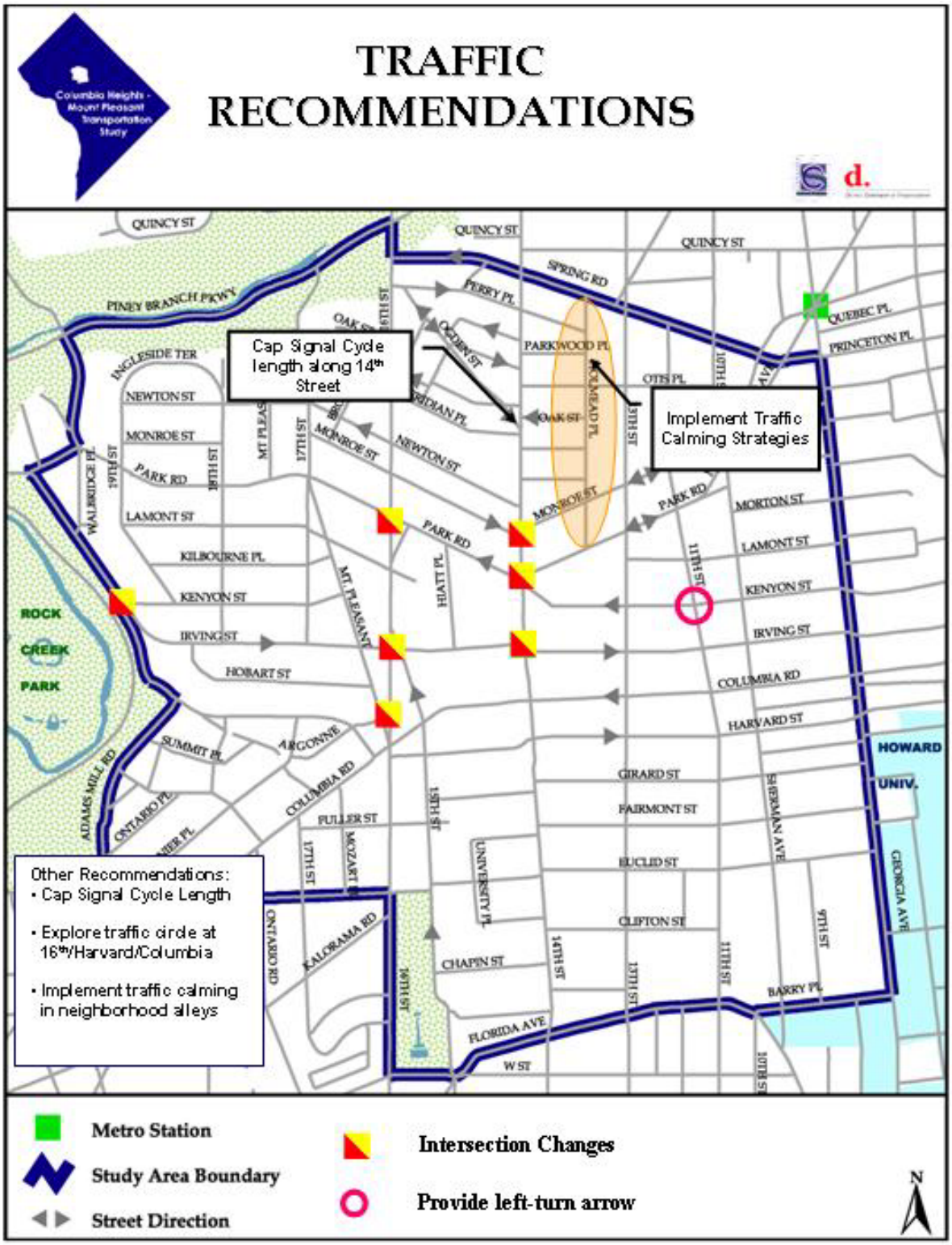
1. Cap signal cycle length at 90 seconds at all intersections (except along 16th Street and Georgia Avenue). Where possible, further reduce cycle lengths, particularly during off-peak periods. High priority for 14th Street. (Long term/Short term)

Extended signal timing phases result in delays and contribute to a hostile environment for pedestrians. The current signal timing phases throughout the study area are excessive given the high level of pedestrian activity in the neighborhood. Because of extended wait times, pedestrians often cross without a protected signal. Existing signal timing phases during peak periods extend to as long as 100 seconds, with much of the green time provided to north-south travel. As a result, pedestrians attempting to cross north-south streets are required to wait an extended period of time.

Given the high levels of pedestrian activity throughout the study area, the recommendation is to shorten traffic signal cycle lengths to no more than 90 seconds during both peak and off-peak periods. Further reductions in signal cycle length should be implemented where possible. Shorter cycle lengths will encourage pedestrians to wait for the walk signal, reduce jaywalking, and help eliminate the "barrier effect" of north-south roadways in the neighborhood. Although this recommendation does not include intersections along 16th Street and Georgia Avenue because of the high level of commuter traffic, the District should attempt to reduce cycle lengths to 90 seconds on these streets if at all possible. The reduction in cycle lengths will have the added benefit of reducing vehicular delays on east-west streets in the study area. Retimings should first focus on the 14th Street corridor.

Estimated Cost: Per signal retiming – $15,000.

Figure 2.1 Traffic Recommendations



2. Retime signals at 16th/Park, 16th/Harvard/Columbia. Reevaluate overemphasis on north-south green time. (Short term)

In general, intersections within the study area are operating with acceptable levels of service. Delays are most common on eastbound and westbound approaches to intersections. Signal timings along major north-south streets, such as 16th Street, 14th Street, and Georgia Avenue, tend to provide ample green time for north-south travel. By contrast, lower levels of service are found on east-west streets through the study area because of more limited green time and excessive cycle lengths. In particular, as seen in Figure 2.2, delays at the intersections of 16th/Park and 16th/Columbia/Harvard can be addressed by retiming the signals.

Estimated Cost: $15,000 (per signal).

Figure 2.2 Delays at 16th/Park

3. Add left turn signal at Sherman/Kenyon. (Short term)

During the public outreach effort, a resident of the neighborhood noted that a signal timing error at the intersection of Sherman and Kenyon is creating a safety hazard. At this intersection, the signal for southbound Sherman turns red several seconds before northbound Sherman. The lack of a left-turn signal at this location creates this confusion. The additional green time provided for northbound Sherman is intended to facilitate the movement onto westbound Kenyon. Kenyon is one-way westbound at this intersection.

Estimated Cost: $5,000.

4. Improve the intersection of 14th Street/Monroe Street to reduce driver confusion and improve pedestrian safety.

The intersection of 14th Street and Monroe creates confusion for both pedestrians and drivers. Currently, vehicles approaching this intersection on eastbound and westbound Monroe are provided access to 14th Street simultaneously. As shown in Figure 2.3, the approaches on Monroe are offset and drivers are often confused by traffic signals for 14th Street. As a result, drivers headed from westbound Monroe Street onto southbound 14th Street often stop in the middle of the intersection. This prevents cars traveling eastbound on Monroe from continuing eastbound.

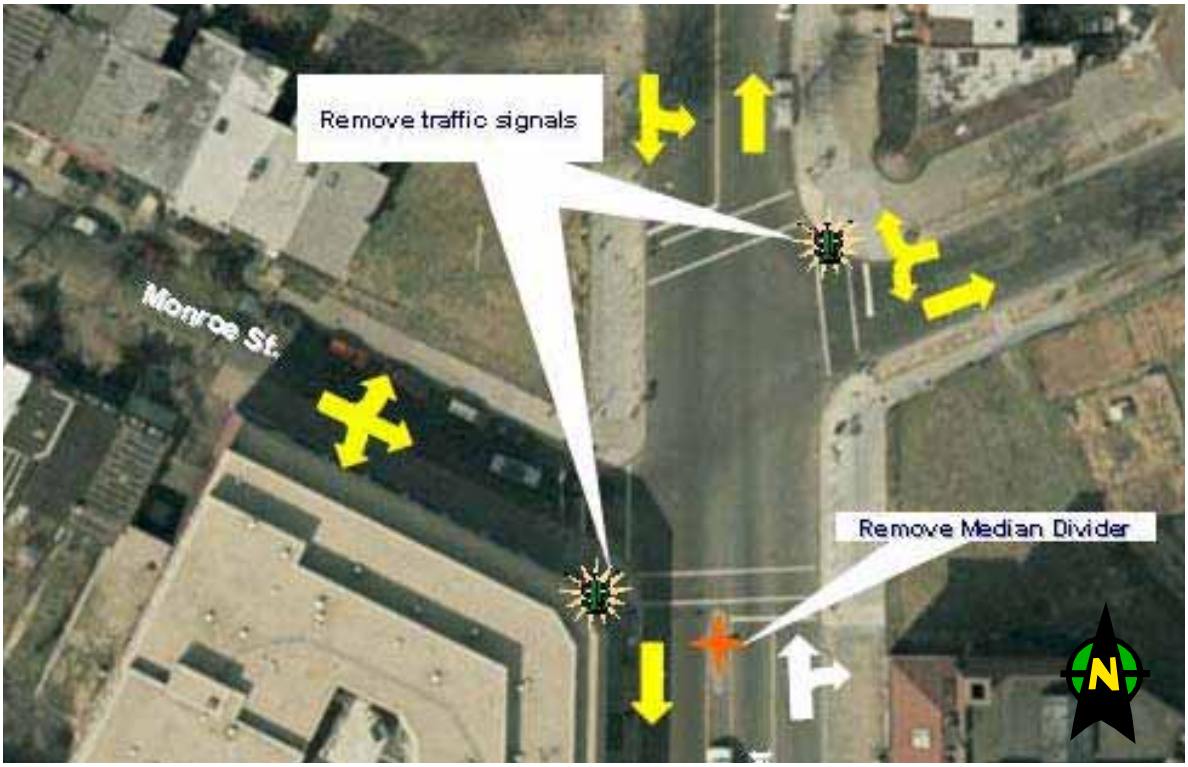
Figure 2.3 Cars Blocking the "Box" at 14th/Monroe

Alternative 1: Establish separate signal phasing for eastbound and westbound Monroe at 14th Street and relocate traffic signals. (Short term)

Under the first alternative, the traffic signal at this location should be retimed to provide separate signal phasing for the eastbound and westbound approaches. In addition, signals for the southbound 14th Street approach should be removed from the south side of Monroe Street (signal heads are located on both the south and north sides of the intersection). This will prevent confusion for those turning from westbound Monroe Street to southbound 14th Street. Similarly, the signal head for the northbound approach should be removed from the north side of the intersection (a signal also exists on the south side of the intersection). This recommendation is shown in Figure 2.4.

Estimated Cost: Signal relocation and separate signal phasing – $34,000.

Figure 2.4 Recommendation – 14th/Monroe *(Alternative 1)*



Alternative 2: Realign Monroe Street west of 14th Street.

A second option, as shown in Figure 2.5, is to realign Monroe Street slightly to the west of 14th Street. The lot on the northwest side of this intersection is currently vacant and could allow for a realignment that would also address pedestrian safety issues at this intersection. This recommendation was not included in the initial list of recommendations presented to neighborhood residents because of concerns that a realignment would further encourage through traffic on Monroe Street. However, a number of area residents have expressed an interest in this improvement. The advantage is an enhancement in safety for pedestrians and better operations. It may also reduce the number of vehicles speeding by creating a slight change in the street alignment near the vicinity of 14th Street.

Estimated Cost: $185,000 (excludes right-of-way acquisition costs).

Figure 2.5 Recommendation – 14th/Monroe *(Alternative 2)*

Geometric Changes

5. Provide intersection improvements to address significant pedestrian safety issues at 14th/Park/Kenyon. (Long term – coordinate with construction of adjacent development)

- **Restrict Park Road to right-in, right-out (east of 14th) – remove signal access to 14th Street;**
- **Reduce width of northbound 14th Street to two lanes (left only onto Park Road, and shared through and right turn); and**
- **Remove left-turn only lane on Kenyon Street.**

The intersection of 14th/Park/Kenyon is hostile to pedestrians. The current signal timings provide limited time for 14th Street pedestrian crossings. Pedestrians are required to press a button to receive a walk signal across 14th Street, the only location in the study area for which this is required. In addition, pedestrian crossings are not provided for all legs of the intersections. The five-legged intersection requires separate green time for the Kenyon Street and Park Road approaches although green time for the Park Road approach is only 15 seconds because of low volumes. The multiple phases of the cycle result in limited 14th

Street crossing times for pedestrians. The geometric design of the intersection, including a left-turn only lane on Kenyon Street, encourages high speeds. Given the expected increase in pedestrian traffic as a result of new development adjacent to this intersection, improvements are critical to ensure adequate safety.

As shown in Figure 2.6, the recommendation is to make a number of changes at the intersection to improve pedestrian safety and provide adequate vehicle capacity to accommodate projected increases in traffic. Restricting Park Road to right-in, right-out will help improve the overall pedestrian environment and the level of service for vehicles. This change will shift a nominal amount of westbound traffic on Park Road to Monroe Street. Westbound traffic on Park Road is less than one-third of that on Kenyon Street during peak periods. Vehicles traveling westbound will have the option of using Kenyon Street or Monroe Street to access 14th Street.

In addition to changes on Park Road, the recommendation is to shift the point at which 14th narrows to one lane in the northbound direction from Monroe Street to the intersection of 14th/Park/Kenyon. This will better align the shift in 14th Street from a major commercial center to a neighborhood retail corridor. It will also allow for an extension of bike lanes to the Metrorail Station and enhance the pedestrian environment. This change will result in two lanes on northbound 14th Street, a left-turn only and a shared through and right-turn lane.

Finally, the current westbound approach on Kenyon Street should be narrowed from three lanes to two by removing the left-turn only lane. Vehicles turning left onto 14th Street will use a shared through and left-turn lane.

Estimated Cost: Intersection improvements – $80,000.

Figure 2.6 Recommendation – 14th/Park/Kenyon

6. Restripe intersection at 14th/Irving to a shared left and through lane. (Short term)

Southbound 14th Street at the intersection of 14th/Irving is currently striped with a left-turn only lane and two through lanes. However, the right through lane does not continue through the intersection. At the south side of this intersection, parking is allowed on 14th Street. The effect is only a single through lane. Given the low volumes of left turns onto Irving Street, the recommendation is to change the left-turn only lane to a shared left and through lane. This change will better align the two through lanes north and south of the intersection and improve the operation and safety of the intersection. A period of protected left turn is still recommended to facilitate movement through the intersection.

Estimated Cost: Restripe intersection – $24,000.

7. **Improve intersection of 16th/Park Road to address intersection delays on westbound Park Road. (Short term)**

   - **Permit left turns from 16th Street northbound to westbound Park Road;**
   - **Stripe three narrow lanes on Park Road west of Pine Street (left, through, and shared through/right);**
   - **Improve parking enforcement on north side of Park Road west of the intersection;**
   - **Remove traffic signal at Park/Pine and replace with stop sign; and**
   - **Provide pedestrian crosswalk across Pine Street at 16th Street.**

Delays at the intersection of 16th/Park are the most significant of the 12 evaluated within the study area. These delays are particularly significant on weekends when on-street parking reduces capacity through the intersections. Improvements are critical to provide adequate capacity for additional traffic expected with the new development along 14th Street. Recommended improvements are depicted in Figure 2.7.

Left turns should be permitted from northbound 16th Street onto westbound Park Road. Currently, northbound traffic must turn right on Pine Street and left on Park Road to make this westbound movement.

In addition, Park Road should be restriped for three westbound lanes at the intersection with 16th Street (a narrow left-turn lane, a through lane, and a shared right and through lane). Park Road is only 29 feet at the intersection, allowing for three lanes, albeit narrower than the standard 11-foot lanes found throughout the District.

As shown in Figure 2.8, the intersection of Pine Street and 16th Street was designed to allow vehicles to turn right without reducing their speeds. As a result, pedestrians crossing Pine Street on the east side of 16th Street face a safety hazard and the District has installed barriers to prevent pedestrian crossings. Permitting left turns at 16th Street will allow for a new pedestrian crosswalk on the east side of 16th Street across Pine Street. As a part of this change, the signal at Pine Street and Park Road should be removed and replaced with a stop sign, which should slightly increase the capacity of westbound Park Road. In addition, the radius of the curb should be decreased at Pine Street and the barriers removed.

Figure 2.7 Recommendation – 16th/Park/Pine

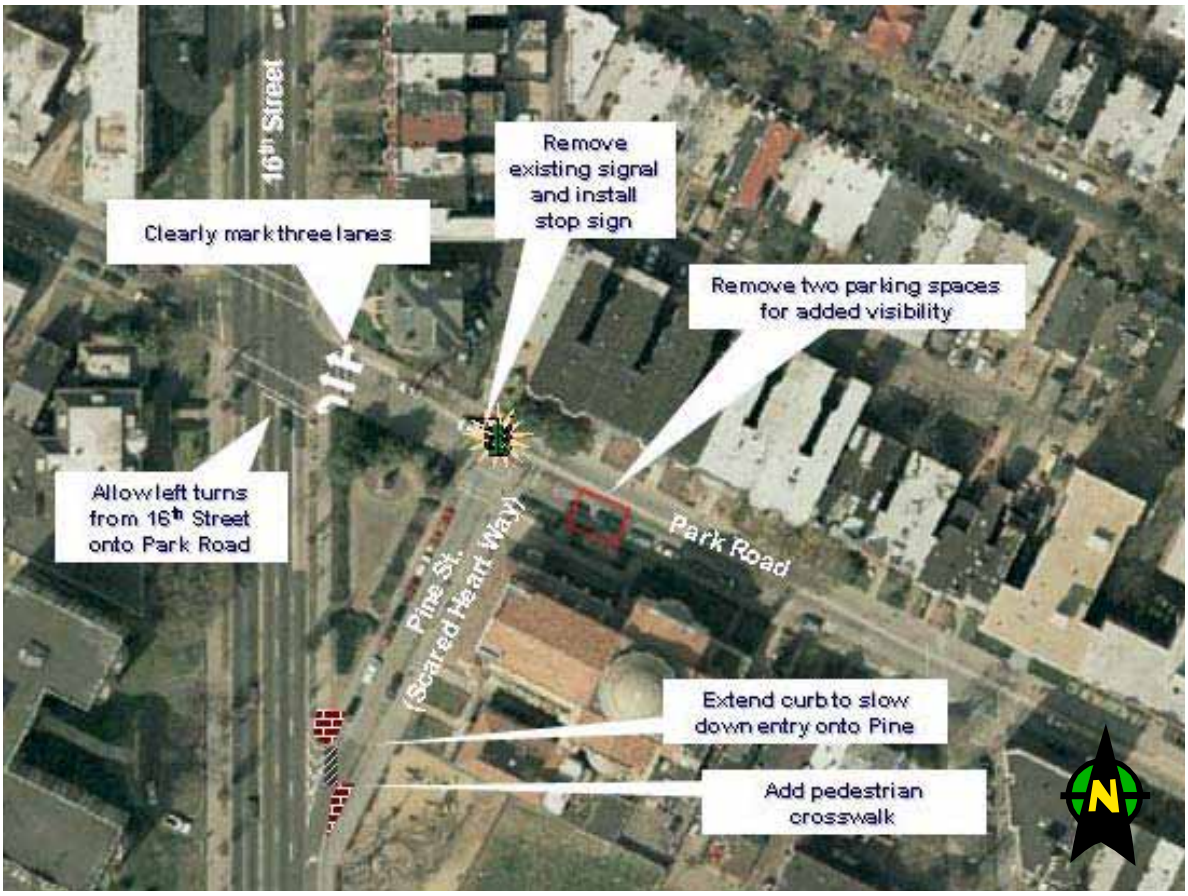


Figure 2.8 Physical Barrier for Pedestrians Along 16th Street

Finally, parking enforcement should be improved on the west side of the intersection, particularly during the morning peak period. Parking and standing is prohibited on the north side of Park Road west of 16th Street during peak periods. However, parents dropping off children and buses unloading at a school on the west side of this intersection frequently block traffic. As a result, Park Road effectively narrows to one lane through the intersection. Parking enforcement officials should work with the school to encourage parents to drop off children away from the intersection. Although this will still reduce Park Road to one lane, it will provide for additional capacity through the intersection.

As an alternative, parking restrictions could be shifted from the north to south side of Park Road with a loading zone in front of the school. Although this might be a more effective approach, it will reduce the number of available on-street parking spaces in an area with limited parking. This option should be considered if recommended improvements do not provide adequate capacity on Park Road.

Estimated Cost: Intersection changes – $65,000.

8. Address significant pedestrian safety and operational issues at 16th/Irving. (Long term)

The intersection of 16th and Irving and the adjacent intersection of 15th and Irving present one of the more significant pedestrian hazards in the study area. Vehicles traveling northbound on 15th Street must merge with 16th Street, at a relatively high rate of speed. In addition, a pedestrian crosswalk is not provided across Irving along 16th Street, despite a high level of pedestrian activity. Field observations indicate that pedestrians continue to cross despite the absence of this crosswalk.

Irving Street serves as a key pedestrian corridor between Adams Morgan and the Columbia Heights Metrorail Station. In addition, a new charter school and a new public school are under construction adjacent to the intersection. Pedestrian activity along Irving will continue to increase as new retail development is completed in Columbia Heights. Addressing safety issues at this location is critical.

The intersection also has some operational issues that must be addressed before the new retail development in Columbia Heights is completed. Vehicles turning left from southbound 16th Street or right from northbound 16th Street onto Irving Street face an immediate red light for the intersection with 15th Street. Storage capacity is available for only a few vehicles. Vehicles often back up onto 16th Street. As new retail development is completed, the number of left and right turns off of 16th Street will increase.

Figure 2.9 15th/16th Merge

Alternative 1:

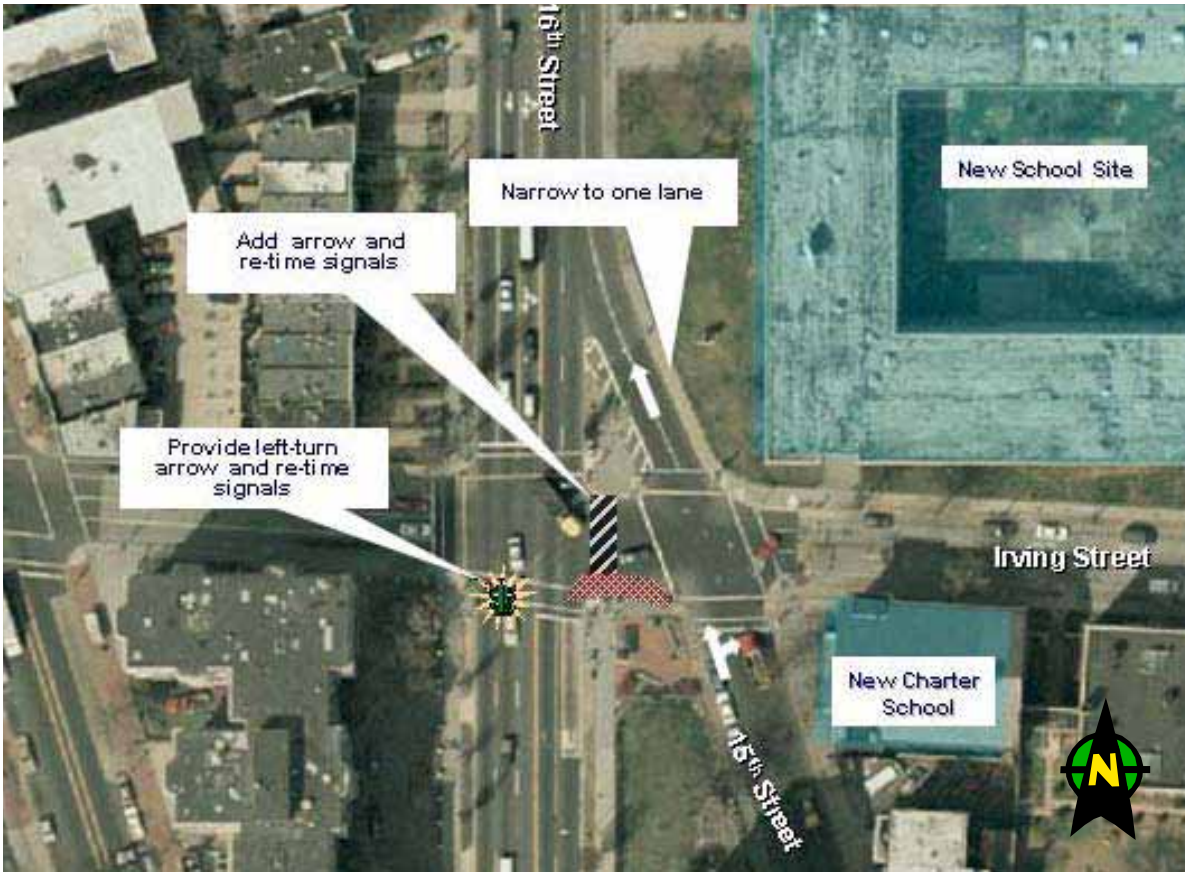
- **Provide protected left turn from southbound 16th Street to eastbound Irving Street; and**
- **Enhance pedestrian safety of the intersection (bump-outs, enhanced pedestrian crosswalks).**

As an alternative to significant intersection changes at this intersection, signal retimings can provide some improvements. Currently, a protected left-turn phase is provided from southbound 16th Street onto eastbound Irving Street. However, the close intersection spacing between 16th Street and 15th Street provides storage capacity for only a few vehicles. The recommendation is to stop northbound vehicles on 15th Street during this protected left-turn phase. This will increase left turn capacity onto Irving Street.

In addition, some pedestrian safety improvements should be provided. DDOT is currently evaluating this intersection in detail. A preliminary assessment of potential improvements is provided in the Appendix to this report. The addition of a crosswalk across Irving Street on the east side of 16th Street should be considered as a part of the pedestrian improvements as well as narrowing 15th Street north of Irving Street.

Estimated Cost: $18,000 (excludes potential bump-outs).

Figure 2.10 Recommendation – 16th/15th/Irving *(Alternative 1)*



Alternative 2:

- **Remove access from northbound 15th Street to 16th Street (restrict 15th Street northbound to right-turn only);**
- **Add protected left-turn arrow from 16th Street southbound onto Irving Street; and**
- **Add pedestrian crosswalk across Irving Street on east side of 16th Street.**

The second alternative, as outlined in Figure 2.11, is to remove access from northbound 15th Street to northbound 16th Street. Drivers headed northbound on 15th Street would face a right-turn only onto Irving Street. Those headed northbound on 15th Street would use Columbia Road or Euclid Street to access northbound 16th Street. Removing this connection to 16th Street will also allow for the removal of the traffic signal at the intersection of 15th/Irving. Vehicles turning left from southbound 16th Street onto Irving Street will no longer face an immediate red light for the 15th Street intersection. This will improve the operations of the intersection and increase the capacity for left turns. Although this alternative will significantly enhance pedestrian safety at this intersection, a number of

neighborhood residents expressed a desire to continue to allow access from 15th Street on 16th Street.

Estimated Cost: Intersection changes – $137,000.

Figure 2.11 Recommendation – 16th/15th/Irving (*Alternative 2*)

9. Provide access from westbound Kenyon Street to southbound Adams Mill Road. (Long term)

Movements are currently prohibited from westbound Kenyon Street onto southbound Adams Mill Road, as shown in Figure 2.12. Drivers headed westbound on Kenyon Street are required to either turn left onto Irving Street or right onto Adams Mill Road. However, drivers routinely turn right onto Adams Mill Road and then make a u-turn just past the intersection to head south on Adams Mill Road. Other drivers access Adams Mill by turn left from an alley behind the residential units along Kenyon Street. This movement is not unexpected because residents of the Mount Pleasant neighborhood are currently required to use Park Road to gain access to southbound Adams Mill Road. This could require a detour of more than a half-mile for some Mount Pleasant residents.

Figure 2.12 Adams Mill Road/Kenyon

The recommendation is to acknowledge the demand for this movement and provide access from westbound Kenyon Street onto southbound Adams Mill Road. This will also require a red phase for drivers headed southbound on Adams Mill Road.

Estimated Cost: Left-turn access onto Adams Mill – $43,000.

10. Explore potential for a traffic circle at 16th/Harvard/Columbia/Mt. Pleasant with grade separation for 16th Street. (Long term)

The intersections of 16th/Harvard and 16th/Columbia are in close proximity and essentially operate as a single intersection. Traffic headed eastbound into Columbia Heights must use Harvard Street. Traffic headed westbound out of Columbia Heights must use Columbia Road. Columbia Road is two way on the west side of 16th Street. Several access and pedestrian issues suggest the need to explore a traffic circle at this location. Traffic volumes on 16th Street peak just north of these intersections. A number of drivers headed southbound on 16th Street turn right onto Columbia Road. Residents also expressed a desire to turn left onto Harvard Road from southbound 16th Street. This movement is currently prohibited, although a number of vehicles made this turn during the collection of traffic counts.

The recommendation is to explore the construction of a traffic circle at this intersection with a grade separation for through traffic on 16th Street. A traffic circle consistent with the character of the District would enhance the connection between Adams Morgan and Columbia Heights, improve pedestrian safety, allow for full access onto and off of Harvard and potentially Mt. Pleasant Street, and increase the capacity of the intersection. Although this improvement has the potential to provide significant benefit to the

community, it may be difficult to implement given the proximity of existing development, concern over park land adjacent to 16th Street, and the cost of grade separation. The analysis of this improvement is beyond the scope of this study, but should be explored in greater detail.

Detailed study required for cost estimates. Preliminary estimates are approximately $14 million.

Traffic Calming

The District of Columbia has recently issued a publication outlining potential options for traffic claming on District streets. Traffic calming is an approach used to slow traffic in areas where speed is a concern with the goal to enhance pedestrian safety and preserve community character. Several specific locations where District strategies should be implemented are outlined below.

11. Implement traffic calming along Holmead Place between Spring Road and Park Road. (Short term)

Residents along Holmead Place have expressed concerns regarding vehicle speeds. Residents are concerned that increased traffic associated with the Tivoli development in particular will result in an increase in through traffic. Given right-in, right-out restrictions recommended for Park Road, Holmead Place may experience a slight increase in traffic volumes, particularly after the completion of the Tivoli development and as 14th Street congestion increases with the completion of other developments.

The recommendation is to implement adopted traffic calming techniques along Holmead Place between Spring Road and Park Road. Traffic calming will address neighborhood resident concerns regarding speeds and preserve the residential character. Some of the measures approved by DDOT that would be applicable along Holmead Place include speed humps, chicanes, or rumble strips.

Estimated Cost: (Samples of individual traffic calming devices)

- *Speed Humps – $2,000;*
- *Rumble Strips (1 set) – $50;*
- *Street Lights – $2,500 to $5,000.*

12. Implement traffic calming in neighborhood alleys. (Long term)

Residents have expressed concerns regarding the speed of traffic through a number of alleys in the neighborhood. In some specific cases, alleys are being used as short cuts to avoid signals or congestion at intersections. As traffic continues to increase in the neighborhood, this issue is likely to become more significant. The District's traffic calming strategies currently focus on neighborhoods streets. The City of San Francisco is